these irrigations were continued twice daily till the patients were discharged. The later cultures, after disappearance of false membrane, had given variable results: four times bacilli were not present after repeated examinations; twice they had persisted, but had lost their virulence; while once there was a single positive result after several examinations. In four cases virulent germs were found for a period of six to fifteen days after disappearance of membrane; in two cases the cultures from the throat were negative, but those from the nose showed the presence of bacilli, which in one case persisted for forty-nine days after removal of the tracheotomy-tube and thirty-eight days after leaving the hospital. In other words, in about half the cases the bacillus had disappeared at the same time as the membranes, or had, at least, ceased to be virulent; but in the other cases had continued for some time after the subsidence of active symptoms of the disease.

The second series of cases, which were treated by antitoxin, had had no local treatment but irrigations of Labarraque's solution (50 to 1000), and included ten cases. In three the results were negative after repeated examinations for one, two, or three weeks. In four cases cultures showed non-virulent bacilli, generally the short variety, although the long or medium bacillus had been present at the onset of the disease. Finally, in three cases a virulent bacillus was found in several successive cultures. In one of these cases, after virulency was demonstrated for twelve days after cure, the short, non-virulent variety was found in the several examinations after this period, and persisted nearly a month after the patient's leaving the hospital. The instances in which the virulent bacillus continued present were especially the grave cases in which the convalescence had been retarded by diphtheritic paralysis or by accidents imputable to the injections (eruptions, arthropathies).

From the above it may be seen that in the two series of cases the results, as far as persistence of bacilli is concerned, are very nearly the same. In comparison with the observations of others, the following conclusions are drawn:

1. In a certain number of cases the bacillus of Loeffler disappears about the same time as the false membranes, or persists for a shorter or longer time, but ceases then to be virulent, taking usually the form of the short variety. This favorable result is realized in one-half to two-thirds of the cases, more especially in those of milder type.

2. In another series of cases, less numerous, but forming an imposing minority, the bacillus persists in a virulent state for some time after the apparent cure of the disease. It may continue in the throat, but more often and for a longer time it is found in the nasal fossæ. Irrigation of the throat and nose appears to limit the persistence of the bacillus, and is therefore indicated not only during the acute stage of the disease, but also after the disappearance of false membrane and during the convalescence.

OBSERVATIONS UPON TEMPERATURE AND PULSE AFTER INJECTIONS OF DIPHTHERIA ANTITOXIN.

VARIOT (*Société médicale des Hôpitaux*, March 1, 1895) states that in most children, following an injection of the serum, there is a rise of temperature more or less marked: four hours after injection the thermometer shows $\frac{9}{10}$° to $1\frac{4}{5}$° F. higher than before; five to eight hours after, this has reached $1\frac{4}{5}$° to $2\frac{7}{10}$°.

In some cases the temperature may rise from normal to 104°. At the end of two to three days the temperature returns to normal. As the temperature rises after injection the pulse becomes accelerated, reaching 140, 150, or 160, and may remain high after the rectal temperature has fallen to 99½°; but after three or four days it returns to the normal, though remaining feeble and small. There is sometimes arhythmia. The author has observed these modifications of pulse in more than one-half of the children treated by the serum. That these effects are due to the serum, not to the disease, is shown by the fact that they have been observed in cases where the antitoxin was used in healthy children as a prophylactic.

THYROID-FEEDING IN CRETINISM.

OSLER (*Archives of Pediatrics*, February, 1895) records the further history and progress of one of the cases reported by him in 1893. (See AMERICAN JOURNAL OF THE MEDICAL SCIENCES, November, 1893.) When first seen by Osler, January 10, 1892, the child, a female, was two years and three months old. Well-marked symptoms of cretinism were present. As it was evident that the blood-condition was below par, she was ordered syrup of the iodide of iron. She was not seen again till March, 1893, when marked improvement was noted. She was then three and a half years old, her height being seventy-five cm. She looked more intelligent, took more notice, and the facial expression was decidedly brighter. She tried to say a few words, and had begun to walk with a little assistance. The most striking changes were in the disappearance, in great part, of the anæmia and lessening of the firm subcutaneous œdema which was previously so marked a feature.

Treatment with the thyroid extract was then begun, at first in the form of the glycerin extract in an amount corresponding to about a quarter of the gland in twenty-four hours. This she took during the summer and autumn, but later the desiccated gland was given in its place.

At the end of fourteen months, in April, 1894, the change was extraordinary, manifested, first, in entire loss of the cretinoid aspect, the color being good, and nutrition evidently much improved; second, she had begun to develop rapidly, and since the last measurements, fourteen months before, she had grown four inches in height; third, she walked and ran about everywhere; and, fourth, the mental development had been proportionately striking.

Another remarkable case showing the beneficial effects of thyroid-feeding has been recently reported by DR. J. P. WEST, of Bellaire, Ohio (*Archives of Pediatrics*, May, 1895). The child was first seen at the age of seventeen months, when she weighed but fourteen and a half pounds and was twenty-three inches in height, presenting a characteristic picture of cretinism, as evidenced by the photograph taken at that time. After six months of thyroid treatment the changes were remarkable. According to the report, which is fully borne out by the photograph accompanying it, there was no evidence that would indicate that the child was a cretin except her height (twenty-seven and a half inches). The skin was soft and clear, the hair plentiful, soft, and silky, and the expression of the face bright and intelligent. The tongue was perfectly normal, and her mouth anything but repulsive. Eight teeth had been cut.

A comparison of the two photographs shows more significantly than any description the wonderful change that had taken place during six months of treatment. During this time she took about 300 doses of desiccated thyroid extract and two drachms of the glycerin extract, the former in doses of one grain twice a day, the latter in doses of one and one-half drop thrice daily. During the administration of the latter preparation the dose had to be occasionally diminished on account of feverishness and fretfulness.

LEBRETON (*Gazette médicale de Paris*, January 19, 1895) reports a case in a boy, aged three years, in which some interesting points concerning the blood-condition were observed. Before the treatment was begun examination of the blood showed 1,750,000 red corpuscles and 4500 white, while the hæmoglobin measured 65 per cent. Six weeks later, during the period of active treatment, the red cells numbered 2,450,000, the white 9,600, and the hæmoglobin had increased to 68 per cent. Dried specimens, at the first examination, showed that the red cells were larger than normal and that some nucleated red cells were present, but this was not observed at the later examination. The relative proportion of mononuclear to polynuclear leucocytes was at first below normal, while the lymphocytes were increased in number. At the later examination there was marked improvement in this respect. The presence of nucleated red corpuscles is attributed to the fact that in these cases the fœtal process of blood-formation persists.

TREATMENT OF CHOLERA INFANTUM.

BLECH (*New York Medical Journal*, March 2, 1895) strongly advocates intestinal irrigation and stomach-washing. For the latter he uses hydrozone in the proportion of a tablespoonful to the pint of water; for the former purpose he uses cold water, adding about two ounces of hydrozone to the quart. Vomiting usually ceases after the first washing, but this procedure may be repeated if necessary. Irrigation of the bowel can be repeated every two hours. Among the other drugs only two are to be employed—morphine and strychnine—to be given hypodermically. No antipyretics should be given; if the fever is very high, and is not reduced by the intestinal irrigation, the whole body should be washed with alcohol. His dietetic regulations are in accord with those generally accepted at the present day.

ANTISPASMIN, A NEW REMEDY FOR WHOOPING-COUGH.

FRÜHWALD (*Archiv f. Kinderheilkunde*, Bd. xviii. Hft. 1 u. 2, S. 38) publishes his experience with antispasmin, a new hypnotic and sedative, which he has used with very satisfactory results in whooping-cough. Antispasmin, first brought to notice by Demme, is a combination of one molecule of narceinnatrium with three of salicylate of sodium. It is a white, feebly hygroscopic powder, readily soluble in water. According to Demme, it is a decided hypnotic and sedative in painful affections, especially of a spasmodic character.

The author has employed it in over two hundred cases of whooping-cough, and has experienced no bad effects upon the stomach or intestinal canal, nor a cumulative narcotic action even in very young children. The general